

Electronics Waste (aka eWaste)

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Protection

What is eWaste?

- Computers, cell phones, televisions, and other electronic devices

eWaste



eWaste



What makes eWaste Hazardous

- Toxic heavy metals such as lead, cadmium, chromium, mercury, silver and antimony

Extent of the eWaste Disposal Problem

- Carnegie Mellon University estimates 60 million PCs have already been buried in US landfills
- National Safety Council estimates 250 million computers will become obsolete between 2004 and 2009 (136,000 per day)
- Americans discard around 100 million cell phones per year – many are reused however a significant number are disposed as trash

(Smithsonian August, 2005)

Extent of the eWaste Disposal Problem

- EPA estimates 57 million televisions and computers are sold to households and businesses annually
- The average household may have between 2 and 3 retired television or computer units in storage
- The number of units (computers mainly) stored by businesses is estimated to be much greater
- Approximately 20-24 million units are added to storage annually – and the storage rate is expected to increase due to technological advances

eWaste Disposal

US EPA Regulatory Guidance

- 1992 classifies used whole circuit boards scrap metal when sent for reclamation
- May 12, 1997 excludes shredded circuit boards being reclaimed from the definition of solid waste provided that they are stored in containers and free of mercury switches, mercury relays, NiCd batteries and Li batteries
- May 26, 1998 scrap metal exemption applies to whole circuit boards containing minor battery or mercury switch component

eWaste Disposal

US EPA Regulatory Guidance

- June 12, 2002 proposes a conditional exclusion from the definition of solid waste for cathode ray tubes (CRTs) and processed CRT glass when they are recycled
- December 26, 2002 direct final rule effective February 24, 2003 provides a conditional exclusion from the definition of solid waste for CRTs and processed CRT glass when they are recycled for a Pilot-Study in EPA Region III
- February 24, 2003 withdraws the direct final rule of December 26, 2002 because of adverse comments received

June 12, 2002 Proposed Rule

- Used, intact CRTs destined for reclamation are not solid or hazardous wastes and are not subject to speculative accumulation provisions
- Used, broken CRTs destined for reclamation are not solid wastes but would be subject to speculative accumulation and other management standards

(2004 RCRA Unraveled McCoy & Assoc.)

Recycling eWaste

Why regulate?

- Recycling glass from computers and televisions a newer industry
- Reusing and recycling glass save natural resources and avoids disposal in landfills and incinerators
- EPA must assure that materials under RCRA jurisdiction are managed in a way that protects human health and the environment

Used CRTs sent for recycling

EPA guidance leaves interpretation to the States

- Under the current RCRA regulations, used CRTs sent directly to glass processors or other recyclers could under some circumstances be considered spent materials undergoing reclamation, and could therefore be solid wastes. However, as explained elsewhere in this notice, EPA believes that under some circumstances used CRTs sent for recycling do not resemble spent materials. Therefore, users and resellers sending used CRTs to recyclers should check with their authorized States to see which Subtitle C requirements, if any, are applicable to their activities. EPA encourages States to take approaches consistent with today's proposal.

What have the States done?

- California enacted The Electronics Waste Recycling Act in 2003
- Maine passed an eWaste law in 2004
- Maryland enacted the Statewide Computer Recycling Program in 2005
- Nevada has not enacted new eWaste regulations
- Nevada Division of Environmental Protection considers eWaste a spent material and a solid waste subject to a hazardous waste determination

Who is regulated?

- Small Quantity Generators (SQGs)
- Large Quantity Generators (LQGs)

and Who is Not?

- Households
- Conditionally Exempt Small Quantity Generators (CESQGs)

(7-8 CRTs weigh approximately 100 kg)

Nevada Division of Environmental Protection eWaste Policy

- Track the eWaste regulation in other States
- Support community eWaste recycling events
- Update the 2007 Legislature

UNR eWaste Recycling Reno, NV

October 2004



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